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Save the Children

Bangladesh Field Office

Integration of Health Activities and Women's Empowerment

Nasirnagar Thana, Brahmanbaria District
Rangunia Thana, Chittagong District

Detailed Implementation Plan

Child Survival 8

September 30, 1992 - September 30, 1995

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Acronyms

ALRI	Acute lower respiratory infection
BPHC	Bangladesh Population and Health Consortium
CDC	Community Development Coordinator
CDD	Control of diarrheal diseases
CD0	Community Development Organizer
CHO	Community Health Organizer
CS	Child Survival Project
DIP	Detailed implementation plan
EPI	Expanded Program for Immunization
FI-IV	Family Health Volunteers
GOB	Government of Bangladesh
HIS	Health information system
K&P	Knowledge and practice
ICDDR,B	International Center for Diarrheal Disease Research, Bangladesh
LGRD	Ministry of Local Government and Rural Development
MOH	Ministry of Health
NGO	Non-government organization
ORS	Oral rehydration solution
ORT	Oral rehydration therapy
SC	Save the Children
TBA	Traditional birth attendant
VAC	Vitamin A capsule
WSG	Women's Savings Group

DIP TABLE–A: COUNTRY PROJECT SUMMARY

(LOTUS TABLE–A.WK1)

PVO/Country: Bangladesh | Project Duration: 3 years | start date: October 1992 | estimated completion date: September 1995

1. BUDGET SUMMARY IN U.S. DOLLARS

(a) a. By year of project	(b) AID Contribution (field + HQ)	(c) PVO Contibution (field + HQ)	Total Contribution (field + HQ)
Year 1	192,346	68,300	260,646
Year 2	277,864	91,000	368,864
Year 3	294,790	95,700	390,490
Country Project total	765,000	255,000	1,020,000

b. Percent of PVO Match	25%

(PVO Contribution divided by Total Contribution: sum of column "c" divided by the sum of column "d")

2. SIZE OF THE PROTENTIAL BENEFICIEARY POPULATION

Note: POTENTIAL BENEFICIARIES are defined as those in the project area who are eligible to receive services for a given intervention, not the percent you expect to provide services to – which may be smaller than the eligible population.

a. Current population within each age group*	(f) Number of Potential Beneficiaries
infants, 0–11 months	5,500
children, 12–23 months	5,500
children, 24–59 months	17,361
children, 60–71 months (if Vitamin A component)	4,217
females, 15–19 years (high risk pregnancy)	7,188
females, 20–34 years	17,271
females, 35–49 years (high risk pregnancy)	13,655
Other (specify)	17,250
Other (specify)	

b. Additional births	
Total estimated live births, years 2 and 3	11,550

c. Total Potential Beneficiaries	99,492

* Note: Females (ages 15--49) should only be included as potential beneficiaries where they are direct beneficiaries of services (for examkple, TT immunizations, or family planning services), and not for educational interventions (for example, education on proper use of ORT)

3. CALCULATION OF A.I.D. DOLLARS per BENEFICIARY per YEAR

a. Total A.I.D. Contribution to Country Project (sum of column "b" in table 1, this page)	765,000
b. Total Potential Beneficiaries (sum of column "f" in table 2, this page)	99,492
c. A.I.D. Funding per Beneficiary for Project (line a. divided by line b. in table 3, this page)	7.69
d. A.I.D. Funding per Beneficiary per year (line c. above divided by 3 years)	2.56

NOTE: When using LOTUS 123, enter data in shaded areas only

4. PERCENT OF TOTAL A.I.D. CONTRIBUTION by INTERVENTION

Place percentages in shaded areas only: percentages must add to 100%

INTERVENTION	Percent of Project Effor %	Percent of AID Funds %
a. Immunization	13%	10%
b. Control of Diarrheal Diseases	10%	8%
c. Nutrition Education	15%	20%
d. Vitamin A	5%	12%
e. Control of Pneumonia	6%	5%
f. Maternal Care/Family Planning	30%	30%
g. Malaria Control	0%	0.5%
h. Other (specify)	20%	14.5%
i. Other (specify)		
j. Other (specify)		
TOTAL	100%	100%

5. ACTIVITIES: Circle all activity codes that apply for each intervention

a. Control of Diarrhea1 Diseases

1 = Distribute ORS packets
2 = Promote use of ORS packets
(3) = Promote home-mix
(4) = Promote SSS home-available fluids
(5) = Dietary management of diarrhea
(6) = ORT training
(7) = Hand washing
Other:
(specify)

b. Immunization

1 = Distribute vaccines
2 = Immunize mother/children
(3) = Promote immunization
4 = Surveillance for vaccine
(5) = Training in immunization practices
Other: Provide logistics and equipemnt to local GOP EPI
(specify)

c. Nutrition

1 = Distribute food
(2) = Provide iron, folic acid, vitamins
3 = Provide scales and growth charts
4 = Sponsor mother-to-mother breastfeeding/promotion support groups
5 = Conduct food demonstrations
(6) = Counsel mothers on breastfeeding and weaning practices
(7) = Conduct group sessions
8 = Training in breastfeeding and weaning
(9) = Training in maternal nutrition
10 = Training in growth monitoring
Other:
(specify)

d. Vitamin A

1 = Vitamin Adeficiency treatment
2 = Vitamin A supplementation
3 = Vitamin A fortification
(4) = Vitamin A education
5 = Vitamin A food production
Other
(specify)

e. Control of Pneumonia

1 = Promote antibiotics
(2) = Health education
3 = Improve referral sites
(4) = Training
Other: Free treatment of neonatal pnemmonia
(specify)

f. Maternal Care/Family Planning

1 = Distribute contraceptives
(2) = Promote exclusive breastfeeding to delay contraception
(3) = Promote child spacing or family planning
(4) = Antenatal care
5 = Promote malaria prophalaxis
(6) = Train TBAs in improved birth practices
(7) = Family planning training
Other: Counselling of husbands newly wed couples
(specify) Training of village practitioners

g. Malaria Control

1 = Residual insecticides
2 = Larvaciding
3 = Provision of bednets
4 = Provision of commodities
5 = Treatment
(6) = Health education
7 = Training
Other:
(specify)

(h) Other:
(specify) Empowerment of women
WSG formation
Training WSG leaders
Training WSG members
Credit and other income generation support

Section B. LOCATION AND FORMAL AGREEMENTS

B.l The project is located in two separate areas within Bangladesh's Chittagong Division: seven unions in Nasimagar Thana, Brahmanbaria District; and four villages in Rangunia Thana, Chittagong District. (Please see map in Appendix: a union is the smallest national government and a thana is a sub-district.) This DIP is based on a baseline survey which included six of the seven unions in Nasimagar: project activities will be initiated in the seventh union next year. In the seventh union, health activities may be promoted mainly through home visits rather than through Women's Savings Groups; in this way, it will be possible to compare the effectiveness of two different approaches to health activity training. Parts of the area covered by this CS8 project were included in SC's CS4 project: the four villages in Rangunia (population 12,961) and 16 villages in Nasimagar (population 46,016).

Approximately 75 % of the population in the two impact areas fall into the poorest class on SC's economic scale for Bangladesh. Nasimagar is flooded for six months of the year and has a poor transportation and communication network. Rice farming and fishing are the main forms of subsistence. Eighty per cent of the population is Moslem and 20% Hindu. The level of literacy among women is very low: 82% of mothers in our baseline survey had not received any education.

B2. These areas were selected as project sites because their poverty, geographic isolation and cultural conservatism have resulted in population health indices that are among the lowest in the country; it is these very factors, however, along with the absence of adequate health infrastructure (in the form of clinical services) which make it difficult to implement and sustain Child Survival activities. These areas were also selected because they offer an opportunity to integrate Child Survival with other health and development activities: an economic development program sponsored by Red Bamet (Danish Save the Children) will be implemented in the Seven Nasimagar unions coincidentally with this CS8 project; a MotherCare Project designed to reduce maternal and neonatal morbidity and mortality is presently operating in five villages of Nasimagar and will inform the development and implementation of strategies in the rest of the CS8 project area. In those parts of the CS 8 project area that were included in CS 4, Women's Savings Groups have been founded; this form of community organization will be extended throughout the CS 8 project area.

In the CS 8 project area, health infrastructure and staff other than those associated with SC are limited: throughout the entire project area, there are only five government facilities (the Nasimagar thana hospital and four Family Welfare Centers). SC's health infrastructure and staffing patterns in the CS 8 project area will be as follow: family health volunteers and women's savings group members, with administrative supervision from Community Development Organizers (CDOs) and technical supervision from Community Health Organizers (CHOs), will work at the village level to promote the practice of protective health behaviors and link families to preventive services; CHOs will work with nurse midwives to implement maternal and child health services. CDOs will be supervised by a Community Development Coordinator (CDC), who works at the union level. A Child Survival Coordinator or health/nutrition/family planning coordinator will work at the Nasimagar impact area level. The community-based health information system which had been implemented in the CS4 area serves as a model for the simplified and less staff-intensive system which will be implemented in the CS8 area; there will be less frequent monitoring in the CS8 system, and computerization of only a portion of the data.

B.3 SC/US is registered to implement development projects by the NGO Affairs Bureau of the Prime Minister's Secretariat (Reg. No. 035). The Ministry of Local Government and Rural Development (LGRD) is responsible for reviewing the BFO's project proposal. SC has a non-formal agreement with the GOB Ministry of Health and Family Planning. In addition,

SC communicated and elicited support from the following government and non-government agencies in planning project activities: Unicef/GOB--EPI; TBA Training Directorate (GOB); ICDDR,B; NIPORT/GTZ; Azimpur Maternal Health and Training Institute; Chandraghona Mission Hospital; Bangladesh Population and Health Consortium; and the Nasimagar Thana Chairman and Health and Family Planning Officers.

Section C. DIP SUSTAINABILITY STRATEGY

C.l By the end of this Child Survival grant, SC expects that a higher proportion of families will be practicing protective health care behaviors and accessing health care services, and that these families will continue to do so after the end of the grant as long as they see an association between these practices and improved health status. SC also expects that demand for preventive services will increase as a result of CS activities. This project utilizes three main approaches to improve the practice of protective health behaviors. One approach is to promote health activities during home visits to all households in the community where there are married women of reproductive age and children younger than six years: this approach aims to achieve high community coverage for those interventions (e.g., immunization) where such coverage is necessary to interrupt disease transmission and where those at risk include all members of the population regardless of socioeconomic status. The second approach reinforces the practice of protective behaviors among Women's Savings Group members, who are of the lowest socioeconomic classes and therefore more likely to be at risk for specific health problems (e.g., malnutrition, some communicable diseases). The third approach requires that those workers who will remain in the field after the project's completion will have improved MCH case management skills (e.g., better delivery practices, improved ability to treat ARI.)

The strategies for sustaining these three approaches differ. Family health visitors who conduct home visits will initially receive a stipend from SC. In order for their activities to be sustained after project completion, the community must develop a mechanism to compensate them for their efforts: we will endeavor to institute such a mechanism by requiring families to begin paying (on a sliding fee scale) for those products which health volunteers can deliver to the homes (e.g., iron tablets, oral contraceptives). It is clear that WSGs must remain viable organizations after the completion of this project if they are to remain avenues for reinforcing health messages: we intend for this to be accomplished by transferring during the course of the project those skills required to administer WSGs from CDOs (who initially organize the WSGs) to WSG leaders. CHOs will train WSG leaders and other WSG members in reinforcing health activities: SC will develop training modules focused on specific tasks (e.g., use of ORT). WSG members will also be encouraged to develop mechanisms (using a portion of savings accumulated by the group) to facilitate referral of emergency cases to hospital and to rehabilitate malnourished children. As it is very unlikely that SC-trained CHOs will be hired at the end of the project to fill appropriate vacancies within the government system, the project will explore the creation of community endowment funds to support CHO activities.

Objectives and indicators used to track progress toward sustainability are as follow: to assess sustainability of home visiting by family health visitors, we will monitor demand and willingness to pay for iron tablets and family planning supplies and assess whether income from sale of these items is sufficient to motivate the workers; to assess the ability of WSGs to reinforce health activities, evaluations of members' health knowledge and practice will be included in the "maturity index" that is used to determine whether WSGs can function independently; and to assess whether improved case management capacity will remain in the communities after completion of the grant, SC will monitor TBA knowledge and practice through pre/post training questionnaires and postnatal interviews with mothers, and the creation of community endowment funds.

C.2 As in all extremely poor communities, residents in SC's project area are most concerned with basic survival and achieving an adequate intake of food; to the extent that health care is at all a priority, it is usually curative care which is viewed as important. SC's experience in earlier CS projects, however, demonstrates that even in such communities, residents can be motivated to practice protective health behaviors if they observe that those behaviors favor the survival and good health of their children. Other evidence for public support of CS activities in similar communities has been the willingness of community residents to donate land for project offices. In order to foster community ownership and support of the project, the WSG members, family health volunteers (FHVs) and community leaders will be involved in all stages of planning and in all aspects of management and implementation of project activities. Community Development Organizers (CDOs) will make the time-limited nature of the project clear to the community, and will emphasize that the CD0 position will be phased out, with transfer of skills to WSG leaders. WSG members and FHVs will be responsible for mobilizing resources, budgeting and designing strategies for phase over to the community. Community leaders and groups who worked with SC in the development of this DIP included members of village development committees in SC's earlier CS project area and the chairman of the union health center.

C.3 Other agencies who will collaborate with SC at local, district and national levels are as follow: the District EPI Department, GOB, which will train SC medical assistants in immunization protocols and supply vaccines and EPI technicians for campaigns; the District and Thana Population Control and Family Planning Department, GOB, which will provide contraceptives for users in SC program areas and provide surgical contraceptive services; Chandraghona Mission Hospital, which will provide assistance with family planning and immunization services and advanced care for cases referred from the Rangunia project area; Azimpur Maternal and Child Health Care Training Institute, GOB, which will train SC nurse midwives and CHOs to be effective trainers of TBAs; TBA Training Directorate, GOB, which will also support training; and BRAC, VHSS, NIPORT/GTZ, and the Bangladesh Population and Health Consortium, which will provide health education materials and training to improve maternal and neonatal care. SC will exchange information about sustainability strategies throughout the course of this project with other NGOs such as World View International, CARE and CONCERN. Dialogue with government and ability to influence government policy will be facilitated because of SC's decision to work at the union level. In-country agencies which were consulted during the development of this DIP were enumerated in section B.3.

C.4 SC will explore whether by the latter half of this project most Family Health Volunteers will be motivated by income earned from sale of contraceptives and iron tablets rather than stipends paid by SC. In the second half of the project, responsibilities for managing WSGs (including promotion of health activities) will be transferred from CDOs to WSG leaders: program management skills of WSG leaders will be strengthened by training in credit, small business administration, and functional education, and will be monitored by a WSG maturity index. Assessment of health knowledge and practice among WSG members will be included in this index.

C.5 According to the baseline survey, families in the project area spent an average of 115 Taka (approximately $3.25 U.S.) on health care in the last month; it must be recognized that this expenditure is likely to be episodic and subject to exaggeration. SC realizes that such expenditure by very poor families is almost invariably for curative care and therefore hesitates to be overly optimistic about drawing upon these resources for preventive care. However, with effective education through Family Health Volunteers and WSGs, families may be willing to pay for such preventive "medicines" as iron tablets and contraceptives; they will almost certainly be willing to pay for curative care for ARI. In addition, WSG members will presumably have greater income with which to pay for these services. All fees which SC

imposes for either preventive or curative care will be on a sliding scale. SC will monitor whether fees collected for supplies distributed by FHVs are adequate to maintain the function of those visitors. In addition, some WSGs may develop health care funds which will allow referral to hospital of defined emergency cases, periodic visits to the village of a doctor or nurse, or food supplements for malnourished children. Dr. Najma, CS Program Coordinator, will be responsible for supervising health financing strategies; (please see Appendix for resume.)

Section D. PROJECT DESIGN

D.l Main tidings from our Baseline Knowledge and Practice Survey were as follow: 50% of mothers identified respiratory or gastrointestinal problems as the main health problem in their household; all infants had been breastfed and 68% of mothers initiated breastfeeding within the first eight hours after birth, but only 43% of infants under four months had been exclusively breastfed; 23% of mothers identified the period from 4 to 6 months as being the appropriate time to begin weaning; less than 1% of children had ever been weighed; only 25 % of children had ever received Vitamin A capsules; 29% of children had diarrhea in the past two weeks (a proportion which would probably increase in the rainy season); 45 % of mothers relied on an anti-diarrheal medicine or antibiotics to treat the diarrhea and only 20% used an ORS sachet or sugar/salt solution; mothers had a low level of knowledge about the importance of signs of dehydration and of increasing fluid intake during diarrhea and food intake during convalescence; 35% of children had signs of respiratory infection in the last two weeks and approximately 61% of these were treated in some way; 60 % of mothers recognized the danger signs for respiratory infection; only 48% of children under 23 months had received any immunizations; mothers' knowledge about correct age for measles immunization was poor; only 27% of children had an immunization card; among 12-23 month old children with immunization cards (who clearly are not representative of all children in the community), 25% had been immunized for BCG, 19% for OPV3, 21% for DPT3, and 18% for measles; the rate of immunization drop out was 58%; only 13 % of mothers had a maternal health card; among mothers with a maternal health card (who again are not representative of all mothers in the community), 80% had received two or more TT vaccinations; 39% of mothers wanted to delay their next pregnancy for two or more years, and 28% did not want any more children; despite this expressed desire for fertility control, only 9% of mothers were using any form of family planning; only 10% of mothers increased food consumption during pregnancy and 21% obtained care; 40 % of mothers cut the cord after their own delivery; 84 % of mothers were illiterate; and 10% belonged to WSGs run by agencies other than SC.

Caution is needed, however, in interpreting some of these data because of the way in which questions or responses were structured on the questionnaire: research in the MotherCare Project has suggested that exclusive breastfeeding levels are much lower than 43 %; because immunization cards are often lost in this area, determining levels of immunization by card as well as maternal history would have yielded a more accurate picture; and cutting the cord after their own delivery does not necessarily mean that mothers were not attended by a TBA.

D.2 The project's overall goal is to achieve sustained reductions in infant and child mortality and morbidity by raising awareness of protective behaviors among community residents, particularly among poor women, and by increasing demand for health services. Findings from the baseline survey (especially regarding ORT, family planning and maternal care) have led SC to modify somewhat the objectives set in the original project proposal. Project interventions are as follow: promotion of immunization; ORT (with emphasis on increased fluid intake during diarrhea); exclusive breastfeeding for children through four months; recognition of and treatment for ARI; appropriate weaning practices; Vitamin A; family planning; adequate maternal intake during pregnancy and lactation; and adequate maternal care during pregnancy, delivery and the postpartum period. The objectives for each of these

interventions are as follow: immunization--80% of children 12-23 months old will be completely immunized, 80% of 15-45 year old women to be appropriately immunized against 'IT and 80% of mothers will know about the correct age for measles immunization, purpose of 'IT vaccines and number needed; ORT--50% of mothers will use ORS and will increase fluid consumption during diarrhea; breastfeeding--70% of infants under 5 months will be breastfed according to final K&P survey, and 30% exclusively breastfed upon more rigorous questioning; ARI--70% of mothers will recognize danger signs, 80% of these will seek treatment, and 90% of those seeking treatment will receive appropriate care; weaning practices--50% of mothers will know appropriate age for weaning; Vitamin A--60% of children under six years will be covered; family planning--increase levels of contraception to 20%; maternal nutrition and care--30% of mothers will know that food consumption should be increased during pregnancy, 60% will attend at least two prenatal care sessions (though 80 % will be immunized against 'IT), 80% of TBAs to be trained as per government and SC training modules, and 70% of mothers to be delivered by trained TBAs. Organization of women into WSGs is a strategy which is expected to facilitate the accomplishment of all the above health objectives; by the end of the project, 70% of eligible women (i.e., those in the lowest socioeconomic class, 70% of total) are expected to belong to WSGs.

Planned inputs are as follow: organization of WSGs; training of FHVs, CDOs and WSG leaders; upgrading skills of CHOs, village doctors, and TBAs; and printing materials (health cards, counselling books, home information cards). Expected outputs include: trained households and WSG members; improved clinical skills among TBAs and CHOs; enrollment of poor women into WSGs; increased immunization coverage of children under two and women aged 15-45 years; families trained in ORT; women counselled on family planning; mothers of children less than 5 months old counselled on breastfeeding; pregnant mothers and their families counselled on maternal care and nutrition, and weaning practices; mothers counselled on ARI and competent treatment of children for ARI; increased attendance at prenatal care sessions and attendance by trained TBAs at delivery; and increased Vitamin A coverage of children younger than six years.

Planned impacts include: reduced morbidity and mortality from immunizable diseases; reduced mortality from dehydration following diarrhea; reduced morbidity and mortality from Vitamin A deficiency; reduced mortality from ARI; improved maternal and neonatal health, including reduced rates of low birthweight; and increased prevalence of contraception.

D.3 This project is designed to achieve sustained improvement in child and maternal health by ensuring that vehicles (i.e., FHVs and WSGs) for continued reinforcement of CS messages remain in place in these communities after the end of the project; the project will explore whether health staff (i.e., CHO) can be sustained by the community. The unusual feature of the project is its emphasis on WSGs. Groups targeted to receive information are all women of reproductive age and mothers of children under the age of two years (except in the case of the Vitamin A intervention, which targets children younger than six years), Health messages will be about the eight interventions listed in D.2. FHVs will identify and communicate with ALL members of these targeted groups, community wide; messages distributed through WSGs will reinforce those communicated by FHVs among women who because of their poverty may be at even higher risk than other target group members.

Support of WSGs and FHVs will be phased over to the community in the second half of the project; the first half of the project will improve the health promotion skills of FHVs and WSG members. It is expected that by the end of the project, these health promotion activities will have generated increased demand for preventive services: the ability of health workers (TBAs, CHOs) to meet this demand will be improved by training, particularly in the area of maternal health.

D.4 Eligible women and children will enter and participate in the project through their enumeration by FHVs at the start of the project and in subsequent quarterly updates. There will be a total of 104 FHVs (26 males and 78 females). FHVs will conduct the initial community census and will enroll all eligible families into the program; these initial enrollment forms will be updated every six months, when the FHVs sweep through the communities to note new eligible families and to check the health status of those originally enumerated. (While the census will be updated bi-annually, health activities will be promoted quarterly--except for immunization, which will be promoted monthly.) Roster books will be created for the following groups: children under two years, to record immunization status; children under six years (to record receipt of Vitamin A capsules); fertile couples, to record use of contraception; and pregnant women, to record TT immunization, attendance at antenatal care sessions, expected date of delivery and outcome of pregnancy. Community birth and death lists will be created; as soon as a new birth is noted, the child will be entered into the under-two and under-five rosters to facilitate early participation in the immunization and Vitamin A programs.

Finally, the FHV will maintain simple lists of families who have been trained in ORT. Thus, during each quarterly or bi-annual household visit, the FHV will update rosters; enter new births or deaths on community lists; add households trained in ORT to the ORT list; and promote health behaviors. Each of SC's female FHVs will cover approximately 350 families; assistance from male FHVs will be requested when female FHVs wish to communicate with husbands about issues related to family planning and maternal care and nutrition. The FHV will report health data to the CHO, who will be supervising their work during the course of the project. The CHO will discuss these data with WSG leaders. The project will explore whether several groups of WSGs can be organized into groups to which FHVs would report after the end of the project; the project will explore whether channels of communication can be established between WSG leaders and village leaders to encourage discussion of data in the wider community.

Another channel for communication to the wider community will be monthly health meetings organized by the CHO and CDO, with help from FHVs: all women in the community, regardless of socioeconomic status, will be invited to these meetings; Dhaka-based medical staff will review and help plan the schedule of topics to be presented at those meetings. The CHO will also investigate any deaths that occur among women and children under five years in order to assign cause (which will be confirmed by Dhaka-based program staff). The CHO will conduct periodic spot checks to ensure that data being reported by FHVs are complete and accurate. Data will not be collected from antenatal clinics or CHO records in this project, but these records will occasionally be reviewed by CHOs, NMWs and Dhaka-based program staff to ensure adequate quality of maternal and child care (especially concerning treatment of ARI and other infections, and referrals to hospital). Data collected in this community-based system will be reviewed at midterm to evaluate progress toward achieving objectives set in this DIR. The simplified community-based health information system outlined above may be sustainable by the community IF community residents perceive that health benefits result from the system; even though the system has been streamlined, it is complete enough to contact pregnant women at least once in the course of their pregnancy and refer them to antenatal services.

The project will explore whether in a limited "sentinel surveillance area" of the project, a more intensive HIS should be maintained in order to generate data that are comparable to those collected in SC's previous HIS and to allow more detailed evaluation of project interventions and longitudinal analysis of health status (especially in relation to socioeconomic indices). The population in this sentinel area will not exceed 50,000. Communities will not be expected to sustain health workers hired to maintain this system. The option of conducting well-controlled cross-sectional surveys rather than longitudinal studies will also be explored.

D.5 DIPS FOR SPECIFIC INTERVENTIONS

D.5a DIP FOR IMMUNIZATION (EPI)

5a. 1 According to the baseline survey, of those children aged 12 to 23 months with immunization cards, 28% were immunized with **DPT1;** 19% for OPV3; and 18% for measles. The immunization drop out rate was 47%. (As immunization cards are frequently lost in this area, it is difficult to assess immunization levels on the basis of cards alone.) Since we define 'completely immunized" children as those who have received BCG, the complete **DPT/OPV** series, and the measles vaccine, the proportion of completely immunized children in our project area cannot exceed 18 **%.** If we assume that women without maternal health cards are unlikely to have been adequately immunized against tetanus, we estimate that iO% of births in the project area are protected against tetanus; because of the frequent loss of cards in the area, however, this assumption is questionable.

5a.2 According to baseline survey data, only 8% of mothers knew the correct age for measles immunization; 62% did not know the correct reason for tetanus immunization; and 30% knew that two 'ITs were necessary during pregnancy.

5a.3 The MOH recommends BCG at birth, **DPT/OPV** at 1, 2, and 3 months; and measles immunization at 9 months. The estimated number of newborns in one year is 5775; since each infant would need four visits by the family health worker and four by or to the clinic/EPI team, a total of 8 health worker visits will be related to immunization. This project defines as high risk any child who is incompletely immunized after the age of 12 months, and all pregnant women; while immunization objectives are stated in terms of 12-23 month old children, children under one year will be targeted.

5a.4 Following are SC's final and yearly objectives for improving immunization levels among eligibles and maternal knowledge regarding immunization:

	year 1	**year 2**	year **3** (final)
children 12-23 mos. fully immunized	**12%(660)**	**60%(3300)**	**80%(4400)**
women aged 15-45 yrs. immunized for **TT**	**12%(3730)**	**60%(18600)**	**80%(24880)**
mothers' knowledge of age for measles	12%(2928)	**60%(14640)**	**80%(19520)**
mothers' knowledge **of TT**	12%(2928)	**60%(14640)**	**80%(19520)**

5a.5 This project will both assist the MOH/EPI with immunization campaigns (as **FHVs** inform mothers of children needing immunization to bring them to camps) and deliver immunization services (through the antenatal and MCH clinics); immunizations will be given at both fixed and mobile facilities, so project beneficiaries will be able to obtain immunizations all year. Inputs include recording the immunization status of eligible women and children during initial family enrollment; training health workers **(FHVs, CHOs, NMWs), CDOs** and WSG leaders in immunization schedules and procedures; **organizing** EPI campaigns; printing cards; and administering immunizations. Expected outputs include: increased coverage for immunizable diseases; increased levels of knowledge about immunization among mothers and WSG members. Expected outcomes include reduced mortality from immunizable diseases.

5a.6 Dr. Najma Khatum, CS Program Manager, will be responsible for technical oversight of Immunization. (Please see Appendix for resumes and job descriptions.) The Child Survival Coordinator will supervise quarterly monitoring of progress in immunizing the eligibles.

5a.7 Several types of project workers will be trained in immunization promotion and/or delivery: FHVs (total 104), CDOs (total 24), and WSG leaders (total 500) will be trained in promotion; CHOs (total 11) and NMWs (total 3) will be trained in delivery. Training sessions will also be organized for village doctors. One day of the six day FHV training course will be devoted to immunization. Other workers will also receive one-day trainings. Trainings in immunization promotion will emphasize the importance of protection against measles and tetanus and completion of the DPT/OPV series; trainings in immunization delivery will include information on reducing immunization drop out (e.g., not denying immunization to children with minor infections). The success of immunization training will be evaluated by periodic supervisory spot checks of FHV performance during home visits and of clinical practices, and by data collected in the HIS.

5a.8 MOWEPI immunization card is in an Appendix. The project will use this card; as government supplies of these cards often fall short of need, the project is prepared to print cards and has included this expense in budget. These cards will be issued and used during mass campaigns: if there is a shortage, immunizations administered will be noted on plain white paper and this information will later be transferred to cards. In cases where cards are lost and mothers cannot give a reliable history, rosters will be consulted.

5a.9 Please refer to section 5a.7 for project strategy on reducing immunization dropouts and missed opportunities. Defaulters will be identified by FHVs and referred to clinics during home visits; eligibles who are not up to date will also be identified during monthly visits.

5a.10 TT immunization will be promoted by FHVs and in WSGs. As more pregnant women are referred for prenatal care, demand for TT vaccine is expected to increase.

5a.11 The problem of cold chain maintenance only affects immunization campaigns run by GOB EPI workers; it does not apply to this project.

5a.12 There will be no formal EPI disease surveillance. The occurrence of deaths due to immunizable diseases, however, will be noted in the HIS through cause-of-death investigation.

D.5b. DIP FOR DIARRHEAL DISEASE CONTROL (CDD)

5b.l According to the baseline survey, 29% of children in the project area had diarrhea in the last two weeks; this proportion would probably be higher in the rainy season. We estimate that children have 2-10 episodes of diarrhea each year, and that each episode lasts 5-7 days. It is estimated that 23 % of cases become persistent (last longer than 2 weeks).(ICDDR,B)

Sb.2 According to the baseline survey, 14% of mothers used ORS sachets, 6% used sugar-salt solution and 10% used cereal-based ORT during their child's last episode of diarrhea. Only 7% administered more fluids than usual and only 11% breastfed more than usual during diarrhea; 11% fed their children more than usual during convalescence from diarrhea; 9% recognized the danger of signs of dehydration. 45% of mothers used an antidiarrheal medicine or antibiotic.

5b.3 The MOH protocol recommends early use of ORT, either ORS sachet or sugar-salt solution.

5b.4 According to project objectives, 50% of mothers will treat children with diarrhea with ORT (either ORS sachets or sugar/salt solution); all mothers who use ORS will know how to prepare it correctly. 50% of mothers will know that fluid intake should be increased during diarrhea and food intake during convalescence. The project will explore whether a traditional

form of diarrhea management (barley water plus a pinch of salt) should also be encouraged on a larger scale.

5b.5 The beneficiary population for the CDD component (education in diarrhea management) includes one member of every household (27,273), usually the mother; the beneficiary population for treatment with ORT is all children younger than six years (24,814). FHVs will promote the use of ORT during their home visits and will demonstrate preparation; it is thought that at least two home visits are needed for initial training in ORT, with reinforcement and testing on following visits. FHVs will emphasize that treatment of diarrhea in high risk children (i.e., malnourished children, children with measles, or those born with low birth weight) is especially important.

5b.6 Mothers will be trained in the management of diarrhea both during home visits and WSG meetings. The following messages will be imparted to improve management of diarrhea: 1) correct preparation of sugar/salt solution and ORS sachets; 2) early initiation and increased frequency of fluids, or increased exclusive breastfeeding (and maternal fluid consumption) for children under 5 months; 3) frequent small feeds during the diarrheal episodes and increased feeding during convalescence; 4) discarding of unused ORS after 6-8 hours; and 5) indications for seeking more advanced care (e.g., persistent or bloody diarrhea, lethargy, decreased urine output). Mothers will also be encouraged to prevent ORT through handwashing and, where possible use of tube well water. The project protocol for home management of diarrhea is included in the Appendices. Planned inputs include the following: training of FHVs, CDOs and WSG leaders; printing of counselling materials and action cards. The expected output is training of all mothers in ORT preparation. The expected outcome is correct management of 50% of diarrhea cases.

5b.7 This project will not promote the distribution of ORS packets, but will train mothers in how to use them correctly in case they obtain them from other sources. Home-mixed sugar/salt solution will be promoted by the project.

5b.8 The formula for the home-mixed sugar/salt solution which will be promoted in this project is as follows: 1/2 liter of water + a three-finger pinch (up to the first crease) of salt + a four finger scoop of sugar or molasses. Molasses and salt are readily available in project villages; FHVs will mark on household pots the correct quantity of water that is needed.

5b.9 The project's CHOs will also be trained in home based management, as well as referral of refractory or complicated cases to centers where intravenous or more advanced care is available. The project supervisor will meet with personnel at GOB health facilities to familiarize them with SC's case management and referral protocol, and to share information about diarrhea management in the project area.

5b.10 Messages on ORT administration were listed in 5b.6; these will be communicated to mothers during home visits by FHVs and during WSG meetings by CDOs and WSG leaders. The mothers' knowledge about ORT will be measured by lot quality assessment techniques: these will be applied when CHOs make periodic supervisory spot checks to homes (selected from the FHV's "Trained in ORT" lists) to assess FHV performance. CHOs will also conduct periodic K&P surveys to assess diarrhea management and community coverage. Materials developed by ICDDR,B and BRAC will be adapted for use in this project.

5b.11 Messages encouraging prevention of diarrhea through hand washing with soap or ash, food hygiene and use of tube well water will be disseminated by FHVs and through WSGs.

5b.12 The CS Program Manager, Dr. Najma Khatum, will be responsible for technical oversight of the project's CDD component; please see Appendix for resume. CHOs will supervise quality of FHVs instruction to mothers.

5b.13 Three types of health workers will receive intensive training in CDD: FHVs (total 104), CDOs (total 24), and WSG leaders (total 500). One day of the FHVs' six day training course will be devoted to CDD. Training will begin in late June/July. There will also be one day of training for other workers, beginning at the same time. CHOs (total 11) and nurse midwives (total 3) will receive a short review course on CDD. Success of training will be evaluated by assessment of mothers' knowledge about ORT (through lot quality assessment by CHOs and K&P surveys).

sb.14 Mothers will receive pictorial training cards which will remain in their homes as reminders of steps to manage diarrhea. When the FHV is satisfied that a mother has mastered all the steps, she will place a check mark on the card.

D.5c. DIP FOR NUTRITIONAL IMPROVEMENT

5c.l On the basis of information collected in SCF's HIS for its earlier CS program areas in Rangunia and Nasimagar, we estimate that 45 % of children aged 0- 11 months would be two standard deviations below the mean in weight-for-age; 84% of children aged 12-23 months; and 87% of children aged 24-35 months. Anthropometric assessment is not part of this project.

5c.2 In the project area, food is scarce in the months of September and October. Food shortages also accompany the natural disasters (floods and cyclones) to which the area is prone;

5c.3 According to the baseline survey, virtually all infants in the project area are breastfed; 68% of mothers initiated breastfeeding in the first eight hours, but only 43% of infants younger than four months were exclusively breastfed (and as mentioned earlier, it is believed this proportion is overly high); 23 % of mothers identified the age between 4 and 6 months as the correct time to initiate weaning. A large proportion of mothers (35 %) curtailed their child's food intake during episodes of diarrhea, but we cannot be certain that this same pattern of limiting intake would apply to all illnesses. Several cultural beliefs hinder the practice of early and exclusive breastfeeding: colostrum is considered contaminated and administration of sweetened water to infants is believed to give them a good disposition. (Other practices affecting breastfeeding, such as maternal food and fluid intake during lactation, are described in the section on maternal care, D5.d.)

Se.4 Nutrition interventions emphasized in this project are educational interventions designed to increase levels of exclusive breastfeeding and increased maternal food intake during pregnancy. All women of reproductive age will receive these messages during home visits by FHVs, but pregnant and postpartum women will receive more intensive attention. The estimated number of mothers of children younger than 2 years in the project area is 11 ,000, and of women pregnant in one year, 7508 (based on the rate of live births/year in an earlier CS program in Nasimagar). Each pregnant woman will be contacted by a FHV at least once in her pregnancy; a roster of pregnant women will be maintained by FHVs to encourage their attendance at antenatal classes. Messages conveyed by FHVs will be reinforced by NMWs and CHOs during antenatal care sessions (two during pregnancy), and by WSG leaders. Growth monitoring of children will not be conducted in this project; therefore, we confine our definition of "high risk" to mothers who are less than 40 kg at the start of pregnancy and who have inadequate weight gain during pregnancy, and who give birth to low birth weight infants.

5c.5 The project's objectives for increasing nutritional status and knowledge related to nutrition are as follow: 70% of infants younger than five months will be breastfed according to USAID K&P survey, and with more rigorous questioning, 30% will be found to be exclusively breastfed; 30% of mothers will know that they should increase their food intake during pregnancy,

5c.6 The project's strategy for improving the nutritional status of infants is to promote exclusive breastfeeding and increased food intake during pregnancy during 1) home visits (when messages will be communicated by FHVs), 2) antenatal care sessions (when messages will be delivered by CHOs and NMWs), 3) WSG meetings (where messages will be communicated by WSG leaders and other members, and CHOs), and 4) postpartum (when messages will be delivered by TBAs, FHVs, NMWs and CHOs). Planned inputs include training all FHVs, 80% of TBAs, all CDOs and WSG leaders, CHOs and nurse-midwives; and duplicating MC materials to be used in counselling families and training various levels of health workers. Expected outputs include home-based training of mothers. Expected outcomes include exclusive breastfeeding of 30% of infants and knowledge about the need for increased food consumption during pregnancy among 30% of mothers. These activities will be instituted in the entire project area at once. By focusing our strategies on behaviors that can be modified even by very poor families, we hope to mitigate the constraints that extreme poverty imposes on any nutritional program. Constraints on the success of the project's strategy include traditional beliefs that hamper the practice of exclusive breastfeeding and dictate that women be fed least and last; by eliciting the participation of men (some FHVs will be men), the project aims to increase the likelihood that women will receive more food in pregnancy.

5c.7 TBAs will be trained to recognize low birthweight infants. They will emphasize to mothers of such infants the special importance of exclusive breastfeeding, special care needed to prevent hypothermia and the importance of obtaining early treatment in case of any signs of infection. It is hoped that the incidence of low birthweight will decrease as food intake during pregnancy increases.

5c.8 The project's strategy for improving the nutritional status of pregnant and lactating women is given in section 5c.6.

5c.9 The project will not provide supplementary foods. WSG members will also be educated in preparation of nutritious weaning foods using locally available materials.

5c.10 Dr. Afzal Hussain, Senior Program Officer for Health/Nutrition/Family Planning, will be responsible for technical oversight of the nutrition component; please see Appendix for job description and resume. Technical assistance to assess the effectiveness of nutrition education materials (described in 5c. 11) will be available from home office and is planned for February, 1994.

SC.11 In the IEC component of a MotherCare Project (based in a small portion of the project area), culturally appropriate messages were developed to improve the nutrition and care of pregnant women. Please see Appendix for a listing of the messages conveyed in booklets used to counsel pregnant women, their husbands and their mothers-in-law. If these messages prove to be effective in changing nutrition behaviors, the booklets will be duplicated in quantities sufficient to use throughout the CS project area. The booklets would be used by FHVs during home visits.

PREVENTION OF VITAMIN A DEFICIENCY

5c.12 According to national data compiled by IPHN/Unicef in 1989, 1.78% of children (1.97% of girls) aged 6 months to 6 years are nightblind.

SC.13 Natural sources of Vitamin A within the project area include green leafy vegetables, pumpkins, carrots and small fish. According to the baseline survey, no more than 33% of mothers were feeding their children younger than three years foods rich in Vitamin A.

5c.14 The GOB provides high potency Vitamin A capsules (200,000 u) to children six months to six years of age every six months, and to children with night blindness (2 capsules day 1, 2 capsules day 2, 1 capsule after one month). SC will distribute VACs every six months only to children in the Nasimagar section of the project area, who are not reached by government services: the beneficiary population for VAC distribution is approximately 2 1,000. Children eligible to receive VACs will be enrolled into the program during the initial census.

SC.15 The project's objective for Vitamin A supplementation is that 60% of children under the age of six years will receive VACs every six months.

5c.16 Children younger than six years who are enumerated in the initial census and children born during the course of the project will be entered into the FHVs' VAC rosters. FHVs will distribute VACS to children in their roster every six months. Capsules will be provided by the GOB. Information about dangers of Vitamin A deficiency, consumption of Vitamin A rich foods, and home gardening will be disseminated through the WSGs.

5c.17 Dr. Najma Khatum, CS Program Manager, will provide technical oversight of the project's Vitamin A component. (Please see Appendix for job description and resume.)

5c.18 FHVs (104 total) will be informed of the importance of Vitamin A intake and will be trained to deliver VACs bi-annually; 1/2 day of their six day training session will be devoted to education on Vitamin A. CDOs (24 total) and WSG leaders (500) will be informed about the local availability of foods rich in Vitamin A and processes for home gardening. Training will begin late June/July. The CHO will supervise FHVs: she will verify that children listed on the FHVs' rosters as having received VAC actually did so, and assess the effectiveness of FHV communications with mothers and coverage of community mothers with Vit A education by periodic K&P surveys; the CHO will also periodically attend WSG sessions to assess how well CDOs and WSG leaders communicate Vitamin A messages.

5c.19 The MOH EPI card (included in Appendix) has a space for recording dates of VAC distribution. If children have this card it will of course be used by FHVs; otherwise, FHVs will rely on their rosters. On days before mass campaigns, FHVs will visit homes where children need Vit A to issue a slip with the child's name; these slips will be collected by GOB outreach workers and given to CHOs, who will note the administration of VAC to children who actually attended the campaign into the FHV rosters.

GROWTH MONITORING

5c.20 This project does not include a growth monitoring component.

5c.21 Current growth monitoring practices in the impact area are almost nonexistent: according to the baseline survey, fewer than 1% of children had ever been weighed; likewise, fewer than 1% had a growth card.

5c.22 The GOB MOH does not have a policy on growth monitoring or a growth card,
5c.24 not applicable
5c.25-30 not applicable

Section D.5d DIP FOR CARE OF MOTHERS

5d.l According to the 1991 yearbook published by the Bangladesh Bureau of Statistics, maternal mortality in rural areas is 4.9/1000 live births. Research from the MotherCare project suggests that leading causes of maternal mortality in Nasimagar are eclampsia, hemorrhage, obstetric complications and infection.

5d.2 According to the baseline survey, only 21% of mothers in the project area visited any health site for prenatal care during their pregnancy; 47% of mothers either did not recognize the need for prenatal care or did not know when it should be initiated; and 60% ate less than usual during pregnancy. Research from the MotherCare Project in Nasimagar suggests that mothers deliberately reduce food intake during pregnancy in order to avoid having a large infant which they believe could cause a difficult delivery; foods that are culturally proscribed during pregnancy include eggs and some fish (in an area where protein consumption is low to start). Women do not have access to iron or folic acid tablets or vitamins. In the one part of the project area where malaria is a problem (the four villages of Rangunia), women can obtain diagnosis and treatment for malaria from MOH facilities, a mission hospital in Chandraghona, Chittagong, and village doctors.

5d.3 According to the baseline survey, 40% of mothers tied and cut the cord during their own delivery; in only 45% of cases was the cord cut by TBAs (but this does not mean the birth was not attended by a TBA). The first referral center for the area (the Nasimagar Thana hospital) is ill-equipped to provide any emergency obstetric care; advanced care can be obtained at the district hospital in Brahmanbaria. Poverty, cultural conservatism and poor transportation all obstruct appropriate referral.

5d.4 Postnatal care in the impact area is presently provided either at a government facility or by "village doctors", (non-professional practitioners with varying degrees of training in allopathic medicine), who may be called by TBAs in the case of a complicated delivery. Few women obtain postnatal care, unless there are serious complications during birth.

5d.5 According to the baseline survey, 39% of mothers wished to delay their next birth two or more years and 28% wanted no more children; despite this expressed desire for fertility control, only 9% were using any form of contraception. Among those few mothers practicing contraception, the pill and injectables were the most commonly used methods.

5d.6 All fertile couples (total 27,273) are potential beneficiaries of family planning interventions. All pregnant women (estimated 7508/year) are potential beneficiaries for antenatal and safe-birthing interventions. Women will be identified as "high risk" during pregnancy if they are not fully immunized against tetanus; very malnourished or anemic at the start of pregnancy; if they fail to gain adequate weight during pregnancy; if they display signs of pre-eclampsia; if they develop serious infections; if they are under 18 or over 35; and if they are of high parity. Not all high risk pregnant women will be referred to hospital for delivery.

5d.7 The project's yearly and final objectives for maternal care are as follow:

intervention	year 1	year 2	year 3 (final)
couples practicing contraception	4% (1091)	23% (6273)	30% (8190)
women who increase food intake during pregnancy	4% (300)	23% (1727)	30% (2252)

intervention	year 1	year 2	year 3 (final)
pregnant women attending 2 PNC sessions	6% (450)	30% (2252)	40% (3003)
TBAs trained	12% (?)	60% (?)	80% (?)
women delivered by TBAs	11% (826)	53% (3979)	70% (5256)

5d.8 The strategy for the project's maternal health component is being adapted from that developed in the MotherCare Project: as this CS project covers a much larger area than that included in the MotherCare Project, certain interventions must be made less staff-intensive to facilitate their sustainability. Please note that the maternal nutrition component of this project was described more fully in section D.5c.

Regarding prenatal and postpartum care, the CS project strategy is as follows: Every woman in the CS project area will be seen by a FHV at two times in the course of her pregnancy, at which times she will be referred for prenatal care; the pregnant woman, her husband and her mother-in-law will be counselled about the importance of appropriate prenatal and postpartum care using materials developed in the MotherCare project. The pregnant woman will be entered into the FHV's roster, along with her TT status and expected date of delivery. This roster will be reviewed by the CHO: if the pregnant woman does not come to the antenatal clinic, the CHO will ask the FHV to visit the pregnant woman's home again, at which time the FHV will invite her again to come to clinic, refer her to a trained TBA and deliver a supply of iron tablets. CHOs will receive training from GOB and from SC Dhaka-based medical staff in antenatal care; TBAs who conduct at least three deliveries a year will receive training in safe birth techniques from GOB staff and more intensive training by SC's NMWs. As "village doctors" are often consulted by TBAs in obstetric emergencies, they will also be trained in the avoidance of harmful practices and perhaps in appropriate antibiotic administration in cases of PROM. The project will explore whether it is feasible for FHVs to visit women two weeks postpartum to record outcome of birth, to reinforce messages on exclusive breastfeeding, and to refer mothers and newborns with problems to the CHO.

Some of the women detected as being high risk during pregnancy (e.g., those with pre-eclampsia) will be referred to hospital for delivery; as referral of all high risk women will not be practicable in this area, the project also focuses on improving field-based case management. Women's Savings Groups will be encouraged to establish insurance funds for referral of emergency cases, and will be trained to do so. Staff at the district hospital (which is unfortunately more distant than the Thana hospital) are able to deal with obstetric emergencies. WSG leaders and CDOs will be trained in reinforcing messages about maternal care and nutrition; some of these messages will be directed toward married adolescent girls, who may be WSG participants.

Family planning will be promoted by FHVs during home visits; some FHVs will be men, to improve communication with husbands. WSGs leaders will also be trained (by CHOs) to discuss family planning. FHVs will distribute oral contraceptives and condoms, while clinical staff will offer injectables and surgical contraception.

The gradual phase-over from free distribution of Fe and contraceptives to sale of such supplies will be explored as part of the project's sustainability strategy.

5d.9 Planned inputs for the maternal care component are as follow: training of all FHVs, CHOs, TBAs (80% of eligible), CDOs, WSG leaders; duplication of materials used in MotherCare project and other educational materials; supplies of iron and contraceptives.

Expected outputs include: all fertile couples counselled on family planning; all pregnant women and their families counselled about maternal care and nutrition. Expected outcomes include: 30% of fertile couples use contraception; 30% of pregnant women know they should increase food intake in pregnancy; 40% of pregnant women know they should attend antenatal classes; and 70% of women are attended by trained TBAs during delivery. FHVs, CHOs and WSG leaders will be trained first according to GOB guidelines; more extensive training developed in the MotherCare Project will be phased in after it is evaluated (February, 1994). Constraints on improving maternal health in the project area include extreme poverty, cultural conservatism, poor transportation facilities and poor facilities at the nearest referral center. The project attempts to overcome these constraints by adopting a three-pronged strategy that emphasizes prevention (through improved nutrition and antenatal care), improved field-based case management of problems (by TBAs and CHOs), and improved referral capacities (by institution of referral funds in WSGs).

5d.10 The MOH has a maternal TT card, but as supplies may be irregular, the project will use the maternal health card that was developed as part of the MotherCare Project. Both cards are included in Appendix. If this card is lost, a new one will be issued and data from the antenatal clinic and FHV pregnancy roster will be used to fill it out.

5d.11 FHvs (total 104, male and female) will be trained in promotion of maternal care and nutrition. CHOs (total 11) will receive standard GOB training as well as more intensive case management training from SC Dhaka-based medical staff adapted from curricula developed in the **MotherCare** Project. Women identified by their communities as TBAs will receive training if they perform more than three deliveries each year. CDOs and WSG leaders will be trained by CHOs in communication of maternal care and nutrition messages. SC NMWs will supervise the quality of care delivered by CHOs in antenatal clinics; CHOs will assess the performance of TBAs and FHVs through periodic supervisory spot checks, and will also assess the ability of WSG leaders to communicate messages on maternal care by attending some WSG meetings.

5d.12 FHVs (total 104, male and female) will be trained in the promotion of birth spacing; CHOs will receive more comprehensive information on modem methods of family planning. The quality of FHV performance and coverage of the population will be monitored by CHOs through periodic supervisory home visits as well as K&P surveys; demand for family planning supplies can be assessed through examination of rosters.

5d.13 Because men in this culture can significantly influence the health care and nutrition of their wives, they as well as women will receive messages on maternal care and family planning. Tables of contents included in an Appendix summarize the types of messages which are included in booklets developed as part of the IEC component in the MotherCare project.

5d.14 Materials which will need to be purchased for the maternal health component of this project are as follow: scales, blood pressure cuffs, stethoscopes and materials for urine testing for the antenatal clinics; and additional copies of promotional materials (maternal health cards, booklets) used in MotherCare Project.

5d.15 Dr. Najma Khatum, CS Program Manager, and Dr. Afzal Hussain, Senior Program Officer for Health/Nutrition/Family Planning will be responsible for technical oversight of the maternal care and family planning components of this project; please see Appendix for resume and job description.

D.5e DIP FOR CASE MANAGEMENT OF CHILDHOOD ACUTE LOWER RESPIRATORY INFECTIONS/PNEUMONIA (ALRI)

5e.1 According to the baseline survey, 35 % of children under two years had symptoms of respiratory infection in the last two weeks. Mortality data collected in the HIS for SC's other CS projects in 1992 showed that 23% of under-five deaths were due to ALRI.

Se.2 Recognition of danger signs for ALRI is fairly high in the project **area.** According to the **baseline** survey, 61% of mothers recognized that fast or labored breathing and chest retractions were cause to bring a child to a health facility; among children who were actually reported as having ALRI in the last two weeks, 93 % were said to have rapid, difficult breathing, and 61% received some type of treatment. There are no sources of parental education on ALRI presently in the impact area. Time required to travel to government clinics to receive antibiotic treatment is on average 2 and **1/2** hours, though treatment from "village doctors" (while costly) is almost available in villages.

Se.3 **Unicef/WHO** has supplied the MOH with a standard protocol for the treatment of **ALRI:** children under 5 years should receive procaine penicillin, ampicillin and cotrimoxazole for five days; children under two months should receive procaine penicillin, ampicillin or amoxicillin for five days. (Please see ALRI protocol included in Appendix for treatment regimen.) The MOH does not limit provision of antibiotics to certain types of medical practitioners or facilities; presently, antibiotics are available from the **Thana** Nasimagar health complex, GOB satellite centers, BFO PHCC, local village practitioners and pharmacies. Antibiotics recommended for treatment of **ALRI** are procaine penicillin, ampicillin, amoxicillin, and cotrimoxazole.

Se.4 In every village, there are likely to be 4 to 10 village doctors. We suspect that few village doctors or pharmacists are familiar with the WHO ALRI case management algorithm. Antibiotics are available year round at all facilities where they are presently supplied.

5e.5 According to the baseline survey, 61% of children with symptoms of **ALRI** received some type of treatment; we suspect that all these children received some antibiotics. On average, village doctors or pharmacists charge 70 taka ($1.80 U.S.) to diagnose and **treat** a **case of ARI.**

5e.6 The beneficiary population for education about ALRI includes all mothers of children younger than 2 years: total 11,102. The beneficiary population for ALRI treatment includes all children younger than 2 years: total 11,102. Even without any additional education, a sizable proportion of parents in this CS project area are able to recognize the danger signs of ALRI; it is also not difficult to ensure that facilities in the area are supplied with antibiotics. Barriers to appropriate diagnosis and treatment are thus more likely to include distance of treatment centers, poor means of transportation, and expense of treatment.

5e.7 Objectives for the ALRI component are as **follow: 70%** of mothers with children younger than five years will recognize the danger signs of ALRI; 80% of these will seek treatment; and 90% of those seeking treatment will receive appropriate care.

5e.8 Mothers will be informed by FHVs during home visits about the danger signs of ALRI, about the availability of treatment from **CHOs** and village doctors, and about the appropriate course of therapy (i.e., not just a couple capsules). These messages will be reinforced during discussions at WSG meetings. **CHOs** will train FHVs and WSG leaders; they themselves will be trained in appropriate case management of ALRI by GOB health institutes and SC's Dhaka-based medical staff. SC's Dhaka-based medical staff will also explore the establishment of training curricula for village doctors. Planned inputs for this component include: training of all

CHOs, FHVs, WSG leaders, CDOs, and village doctors. Expected outputs include: training of all mothers of children under two years in ARI management. The expected outcome of these activities will be that 50% of all children with ALRI receive appropriate care. Training of families will be started at the same time throughout the entire project area. In those portions of the project area which were included in earlier CS projects, CHOs are already treating ALRI; trainings of CHOs in the rest of the CS project area will begin at the same time.

5e.9 In the new areas of this CS project, additional CHOs will be trained to begin treatment of ALRI..

Se.10 Contact has already been established with local MOH facilities: GOB health officials have offered training for project staff. These project staff will in turn train village doctors and pharmacists. The project does not intend to supply government facilities with training or supplies, but project staff will share their experience with government agencies.

5e.11,12 All CHOs (11) will receive training in ALRI management. CHOs will train all FHVs (total: 104), CDOs (total:24) and WSG leaders (total:500) in recognizing the danger signs of ARI and in obtaining appropriate treatment; one day of the FHVs' six-day training course will be devoted to management of ARI. Training FHVs and WSG leaders and treating ALRIs will certainly add to the workload of CHOs: it is hoped that the satisfaction of being able to competently treat such a common cause of child mortality will offer some compensation; the availability of competent treatment from other sources (e.g., village doctors) may help reduce the burden on CHOs.

5e.13 Workers supported by the project will use the WHO ARI case management algorithm.

Se.14 GOB/Unicef materials, which are based on the WHO algorithm, will be used in training CHOs. CHOs will receive 8 hours of training, and training will begin July/August.

5e.15 The Dhaka-based project supervisor will periodically assess the quality of ALRI treatment by reviewing log books of CHOs and directly observing case management. CHOs will assess the performance of FHVs in communicating messages about ALRI to mothers through lot quality assessment techniques (i.e., home visits during which they will evaluate adequacy of mothers' knowledge about ALRI).

5e.16 The BFO's ALRI Training Curriculum for Families is included in an Appendix: caretakers of children will be trained in recognizing danger signs of ALRI infection and in courses of action required to obtain competent diagnosis and treatment.

Se.17 The project will furnish CHOs with an initial supply of antibiotics, obtaining these antibiotics from local markets. It is estimated that children have 2 or 3 ARI's each year. A sliding fee scale will be established for treatment with these antibiotics, in order to allow the establishment of a revolving drug fund.

Se.18 The CS Program Manager, Dr. Najma Khatum, will provide technical oversight for the project's ALRI component. Please see Appendix for resume and job description.

D.5f DIP FOR CONTROL OF MALARIA

5f.l The project's very limited malaria control component will apply only in the four villages in Rangunia, where malaria is prevalent. This component will consist only of training village doctors in appropriate use of anti-malarial drugs, and in training families in use of bednets. It is thought that children in this area may have one episode of malaria each year. Although

malaria is not perceived as a problem unless an actual episode has occurred, mothers do identify febrile illness as a problem.
5f.2 Chloroquine and other anti-malarial drugs are readily available through village doctors and private pharmacies. There is some resistance to chloroquine, and Fansidar and tetracycline are recommended by the **MOH** as second-line drugs.

5f.3 No biomedical data were collected at baseline.

5f.4 No traditional remedies are used to treat malaria at home.

5f.5 Groups eligible for education are village doctors (on appropriate treatment) and families (on use of bednets).

5f.6 FHVs will tram all households in use of bednets; project medical staff will train 60% of village doctors. Use of bednets is likely beyond the means of the poorest families in these communities: by the end of the project, 30% of families may be using bednets; this can be assessed by a rapid K&P survey. The proportion of village doctors who will be using antibiotics correctly will not be measurable.

5f.7 The MOH protocol for malaria treatment is included as an Appendix. This protocol will be used by the project in training village doctors, but it will not be possible for project staff to ensure that it is followed. The project will attempt to develop some mechanism to monitor prescribing practices.

5f.8 The project will tram families only in the prevention of malaria through use of bednets.

5f.9,10. not applicable

5f.11 Malaria is endemic in Rangunia.

5f.12 Bed-nets used in this project will not be treated with insecticide.

5f.13-16 not applicable

5f.17 Extreme poverty among 70% of families in the project area constrains the use of bednets.

5f.18 Dr. Najma Khatum, CS Program Manager, will supervise the malaria control component. Please see Appendix for resume and job description.

D.5g DIP FOR OTHER PROJECT INTERVENTIONS

A key strategy for facilitating implementation of the **health** interventions detailed above is the establishment of **WSGs.** Data from SC's earlier CS projects in Bangladesh suggest that empowerment of women through participation in **WSGs** is reflected in improved survival and health of their children, particularly their female children. Moreover, **WSGs** offer a channel for health education and a means for making some health interventions sustainable.

According to the baseline survey, 9% of the women in the project area currently belong to non-SC **WSGs. As** SC **WSGs** will only be open to women from the poorest households, 70% out of total women in the project area will be eligible to participate.

CDOs will be responsible for organizing **WSGs** in those parts of the CS 8 project area that were not included in SC's previous impact areas. Each CD0 will organize and supervise

the administration of 30 WSGs, with the assistance of two volunteers in each group; the position of CD0 will be phased out at the end of the project, and CD0 responsibilities will be transferred to WSG leaders. Each WSG will include 15-20 members.

Modules will be developed to train CDOs and WSG leaders in those health interventions which will be promoted through groups: e.g., ORT; recognition of ALRI; establishment of Emergency Referral Funds.

Section E. **PROJECT** HEALTH INFORMATION SYSTEM

E.l Reaching project objectives will be dependent on efficient use of health information to target families and reach all those who are eligible for project interventions. Thus, management has set aside 10% of its budget for the establishment and maintenance of the health information system. The Computer Systems Manager and Monitoring Coordinator, under the supervision of Dr. Najma Khatum, will be responsible for HIS management. (Please see Appendix for job description and resume.) SC's BFO has had much experience in previous CS projects in designing and maintaining an HIS: technical assistance may be required to compare the quality and usefulness of data collected in the more streamlined HIS which will be used in this project to those of data which were collected in earlier projects. The project will explore whether local technical assistance (e.g., from ICDDR,B) can provide advice on techniques for longitudinal monitoring in the sentinel surveillance area.

E.2 A complete census of families has not yet been done. FHVs (104) will conduct the census in May/June. They will receive census training in late April; just for the purpose of conducting the census, it will be necessary to hire some literate workers on a temporary basis to assist illiterate FHVs in filling out family enrollment forms. Census records will be updated quarterly to record births, deaths and in-/out-migrations.

E.3 Please note that some aspects of the HIS were described in section D.4. The following data will be collected by FHVs in the community-based system and will be updated as indicated: vital events--births, deaths, in/out migrations--(updated quarterly); fertile couples (updated quarterly); pregnancies (updated quarterly); immunization status (updated monthly); training in ORT (updated quarterly). FHVs will report data to CHOs, who will tabulate data for presentation to WSGs and other community groups, and for program planning with CS coordinators, impact managers and other technical staff. CHOs will also monitor quality of data and FHV communication with mothers through supervisory spot checks and K&P surveys. Data collected in this HIS will not be computerized: rosters will remain in the hands of FHVs and CHOs.

If it is determined that maintenance of a more intensive longitudinal data base in a limited sentinel surveillance area would be valuable, only those datawould be computerized. Studies of sentinel site data will be shared with MOH and other NGO representatives.

E.4 CHOs who have worked in earlier CS projects have received training in data collection, analysis and interpretation. FHVs will receive three days of training in family registration and maintenance of rosters, and periodic refresher training. Workers hired temporarily to help with the census will also receive training in family registration. FHVs and temporary workers will be trained by CHOs and CS coordinator.

E.5 The community provided guides for the interviewers during the recent baseline study. Fifteen interviewers and 10 supervisors conducted the baseline study: they received three days of training and collected the data in two days. The total cost of the survey was $4,226.29.

Section F. HUMAN RESOURCES

F.1,2 Please see Appendix for the organizational chart. Five hundred **WSGs** will be involved in the project. **WSGs meet** monthly.

F.3 In total 104 FHVs and 11 **CHOs** will take part in this project. Each female FHV will be visiting 350 families; each CHO **will** on average be supervising 9 or 10 **FHVs.**

F.4 In previous CS projects, FHV turnover has ranged between 10 to 15%.

F.5 Training sessions throughout the project should reduce the rate of drop out. In addition, FHVs will be receiving stipends at the start of the project; by the end of the project, it is hoped that FHVs can be motivated to continue home visiting by income from sale of some health supplies at the household level rather than stipends.

F.6 The project will utilize training provided by some MOH agencies but in some cases (e.g., maternal care and nutrition) will complement this by more intensive training using its own protocols. Refresher training will be provided to both FHVs and **CHOs.**

F.7 Country nationals manage all aspects of this project. Their skills will be enhanced through pre-service and on-the-job training, formative supervision, and exchange visits to other projects.

F.8 Members of the Health Unit from SC's USA home office (mainly Dr. Katherine Kaye) will provide technical backstopping of the project. Six visits will be made during the course of the project, to provide technical assistance and for participation in the midterm and final evaluations.

Section G. MANAGEMENT AND LOGISTICS

Gl. FHVs will be able to walk or take village boats to the homes they are scheduled to visit; other levels of CS Project workers will sometimes travel by vans to various parts of the impact area.

G2. Equipment which must be obtained for this project is as follows: printed material and stationery (maternal health cards and wunselling books; EPI cards; ORT action cards; roster bwlcs), scales for weighing mothers; stethoscopes and blood pressure cuffs; urine testing kits for MCH clinics; TBA kits; Vitamin A capsules, Fe tablets, antibiotics for treating ARI and infections presenting at antenatal clinic; oral and injectable contraceptives. TBA kits and some other materials related to maternal care have been ordered; other supplies will be ordered as needed.

TABLE–B: COUNTRY PROJECT SCHEDULE OF ACTIVITIES

(LOTUS\TABLE-B.WK1)

(Check box to specify Quarter and Year)

PVO: Save the Children (USA) Country: Bangladesh	Year 1				Year 2				Year 3			
	1	2	3	4	1	2	3	4	1	2	3	4
1. Personnel in Position												
a. Project Manager	x	x	x	x	x	x	x	x	x	x	x	x
b. Technical Coordinator	x	x	x	x	x	x	x	x	x	x	x	x
c. Health Information System Manager	x	x	x	x	x	x	x	x	x	x	x	x
d. Community/Village health workers		x	x	x	x	x	x	x	x	x	x	x
e. Other Support	x	x	x	x	x	x	x	x	x	x	x	x
2. Health Information System												
a. Baseline Survey												
– Design/preparation	x				x							
– Data collection and analysis		x			x							
– Dissemination and feedback to community and project management		x	x		x							
b. Consultants/Contract to design HIS	x											
c. Develop and test HIS	x	x	x									
– Implementation			x	x	x	x	x	x	x	x	x	x
– Development and feedback to community and project management					x			x				x
3. Training												
a. Design	x	x										
b. Training of trainers		x	x		x		x		x		x	
c. Training sessions			x	x	x	x	x	x	x	x	x	x
d. Evaluation of knowledge and skills		x				x			x			x

TABLE B: COUNTRY PROJECT SCHEDULE OF ACTIVITIES

PVO: Save the Children (USA) Country: Bangladesh	Year 1				Year 2				Year 3			
	1	2	3	4	1	2	3	4	1	2	3	4
4. Procurement of Supplies		x	x	x	x	x	x	x	x	x	x	x
5. Service Delivery to be initiated												
a. Area 1: New (extension) areas												
Sapone/Ipelce/Doulougou 18 villages												
– ORT			x	x	x	x	x	x	x	x	x	x
– Immunization			x	x	x	x	x	x	x	x	x	x
– Nutrition												
Breastfeeding			x	x	x	x	x	x	x	x	x	x
Maternal Nutrition			x	x	x	x	x	x	x	x	x	x
Vitamin A				x		x		x		x		x
Growth Monitoring/Promotion												
– ALRI/Pneumonia			x	x	x	x	x	x	x	x	x	x
– Family Planning/Maternal Care			x	x	x	x	x	x	x	x	x	x
– Other: WSG formation & Women's Emp.				x	x	x	x	x	x	x	x	x
b. Area 2: Old (CS4) areas												
Sapone/Ipelce/Doulougou 8 villages												
– ORT	x	x	x	x	x	x	x	x	x	x	x	x
– Immunization	x	x	x	x	x	x	x	x	x	x	x	x
– Nutrition												
Breastfeeding	x	x	x	x	x	x	x	x	x	x	x	x
Maternal Nutrition	x	x	x	x	x	x	x	x	x	x	x	x
Vitamin A		x		x		x		x		x		x
Growth Monitoring/Promotion												
– ALRI/Pneumonia	x	x	x	x	x	x	x	x	x	x	x	x
– Family Planning/Maternal Care	x	x	x	x	x	x	x	x	x	x	x	x
– Other: Empowerment of women	x	x	x	x	x	x	x	x	x	x	x	x

TABLE B: COUNTRY PROJECT SCHEDULE OF ACTIVITIES

PVO: Save the Children (USA) Country: Bangladesh	Year 1				Year 2				Year 3			
	1	2	3	4	1	2	3	4	1	2	3	4
6. Technical Assistance												
a. HQ/HO/Regional office visits	x	x					x					x
b. Local Consultants				x			x	x				
c. External technical assistance		x		x			x					x
7. Progress report												
a. Annual project reviews		x			x				x			
b. Annual reports				x				x				x
c. Mid-term evaluation							x					
d. Final evaluation												x